

CLEAN COPY OF THE PENDING CLAIMS

37. (New) An isolated monoclonal antibody produced by a hybridoma selected from the group consisting of A1G5 having Accession No. FERM BP-7441, D2F4 having Accession No. FERM BP-7442, and E3H8 having Accession No. FERM BP-7443 recognizing osteoclastogenesis inhibitory factor.

38. (New) The isolated monoclonal antibody of claim 37 wherein said hybridoma is A1G5 having Accession No. FERM BP-7441.

39. (New) The isolated monoclonal antibody of claim 37 wherein said hybridoma is D2F4 having Accession No. FERM BP-7442.

40. (New) The isolated monoclonal antibody of claim 37 wherein said hybridoma is E3H8 having Accession No. FERM BP-7443.

41. (New) An assay kit for determination of osteoclastogenesis inhibitory factor protein concentration, the assay kit comprising at least one monoclonal antibody produced by a hybridoma selected from the group consisting of A1G5 having Accession No. FERM BP-7441, D2F4 having Accession No. FERM BP-7442, and E3H8 having Accession No. FERM BP-7443.

42. (New) The assay kit of claim 41 wherein said hybridoma is A1G5 having Accession No. FERM BP-7441.

43. (New) The assay kit of claim 41 wherein said hybridoma is D2F4 having Accession No. FERM BP-7442.

44. (New) The assay kit of claim 41 wherein said hybridoma is E3H8 having Accession No. FERM BP-7443.

45. (New) Hybridoma selected from the group consisting of A1G5 having Accession No. FERM BP-7441, D2F4 having Accession No. FERM BP-7442, and E3H8 having Accession No. FERM BP-7443.

46. (New) The hybridoma of claim 45 wherein said hybridoma is A1G5 having Accession No. FERM BP-7441.

47. (New) The hybridoma of claim 45 wherein said hybridoma is D2F4 having Accession No. FERM BP-7442.

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48. (New) The hybridoma of claim 45 wherein said hybridoma is E3H8 having Accession No. FERM BP-7443.

49. (New) A monoclonal antibody which binds to osteoclastogenesis inhibitory factor protein, comprising:

- (a) molecular weights as determined by SDS-polyacrylamide gel electrophoresis (SDS-PAGE) of approximately 60 kD under reducing conditions, and approximately 60 kD (a monomer) and 120 kD (a homodimer) under non-reducing conditions;
- (b) high affinity to cation-exchange resins and heparin derivatives;
- (c) inhibitory activity for osteoclast differentiation and/or maturation, wherein said activity is decreased by heating said protein at about 70°C for about 10 min. or at about 56°C for about 30 min., and wherein said activity is lost by heating at about 90°C for about 10 min.; and
- (d) an internal amino acid sequence as provided in SEQ. ID NOS. 1, 2 or 3;

wherein said monoclonal antibody comprises a binding site selected from the group consisting of A1GF having Accession No. FERM BP-7441, D2F4 having Accession No. FERM BP-7442, and E3H8 having Accession No. FERM BP-7443 binding sites.